

Xerox Docket No. D/A1224
Application No. 09/683,537

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A light emitting diode bar system comprising:
an array of light emitting diodes on a substrate;
a control unit coupled to the array of light emitting diodes, the control unit comprising including or coupled to a data formatting unit and a clock circuit that outputs for generating a clock output signal that enables properly timed activation of individual light emitting diodes of the array of light emitting diodes;

the control unit further including or coupled to and a spread spectrum clock generator that generates the for generating a clock output signal, wherein the clock output signal has with reduced amplitude electromagnetic interference spectral components.

2. (Currently Amended) The light emitting diode bar system according to claim 1, wherein the clock circuit is coupled to an oscillator that is coupled to the spread spectrum clock generator, wherein the to: an oscillator generates for generating a reference frequency signal such that the clock output signal generated by the spread spectrum clock generator has ; and the spread spectrum clock generator coupled to the oscillator to generate a spread spectrum output signal having a fundamental frequency and reduced amplitude EMI spectral components at harmonics of the fundamental frequency.

3. (Original) The light emitting diode bar system according to claim 1, wherein the spread spectrum clock generator comprises:

a clock pulse generator; and

a spread spectrum modulator.

Xerox Docket No. D/A1224
Application No. 09/683,537

4. (Original) The light emitting diode bar system according to claim 3, wherein the spread spectrum modulator is a frequency modulator.

5. (Original) The light emitting diode bar system according to claim 4, wherein the frequency modulator is a profile modulator for modulating the clock pulse generator with a periodic waveform.

6. (Original) The light emitting diode bar system according to claim 3, wherein the spread spectrum modulator varies up and down at an asynchronous rate to a clock strobe pulse.

7. (Original) The light emitting diode bar system according to claim 1, wherein the system includes at least two arrays of light emitting diodes.

8. (Currently Amended) ~~The light emitting diode bar system according to claim 1, wherein~~ A light emitting diode bar system comprising:

an array of light emitting diodes on a substrate;
a control unit coupled to the array of light emitting diodes, the control unit comprising a data formatting unit and a clock circuit that outputs a clock output signal that enables properly timed activation of individual light emitting diodes of the array of light emitting diodes; and

the array of light emitting diodes includes or is including or coupled to the a spread spectrum clock generator that generates a spread spectrum output signal having reduced amplitude electromagnetic interference spectral components and that enables reduction of electromagnetic interference emissions from the array of light emitting diodes.

9. (Currently Amended) An image forming device including the light emitting diode bar system of claim 1, and further having an electrically chargeable a photoreceptor on

Xerox Docket No. D/A1224
Application No. 09/683,537

which a latent image of an original image is formed by the light emitting diode array, which latent image is subsequently developed with toner and then transferred to a transfer surface.

10. (Currently Amended) The image forming device according to claim 9, wherein the clock circuit is coupled to an oscillator that is coupled to the spread spectrum clock generator, wherein the ~~to: an oscillator generates for generating a~~ reference frequency signal such that the clock output signal generated by the spread spectrum clock generator has; and ~~the spread spectrum clock generator coupled to the oscillator to generate a spread spectrum output signal having a fundamental frequency and reduced~~ amplitude EMI spectral components at harmonics of the fundamental frequency.

11. (Currently Amended) The light emitting diode bar system according to claim 8 ~~The image forming device according to claim 10~~, wherein the spread spectrum clock generator comprises:

- a clock pulse generator; and
- a spread spectrum modulator.

12. (Original) The light emitting diode bar system ~~The image forming device~~ according to claim 11, wherein the spread spectrum modulator is a frequency modulator.

13. (Original) The light emitting diode bar system ~~The image forming device~~ according to claim 12, wherein the frequency modulator is a profile modulator for modulating the clock pulse generator with a periodic waveform.

14. (Original) The light emitting diode bar system ~~The image forming device~~ according to claim 12, wherein the spread spectrum modulator varies up and down at an asynchronous rate to a clock strobe pulse.

Xerox Docket No. D/A1224
Application No. 09/683,537

15. (Currently Amended) A method of reducing electromagnetic interference emissions from a light emitting diode bar system of a xerographic an image forming device, wherein the light emitting diode bar system comprises

an array of light emitting diodes on a substrate; and

a control unit including or coupled to a data formatting unit and a clock circuit that outputs for generating a clock output signal with reduced amplitude electromagnetic interference spectral components, the method comprising modulating a frequency of the clock circuit to spread electromagnetic emissions over a range of frequencies.

16. (Currently Amended) The method of reducing electromagnetic interference emissions from a light emitting diode bar system of a xerographic an image forming device according to claim 15, wherein the frequency is modulated using a periodic waveform.

17. (Currently Amended) The method of reducing electromagnetic interference emissions from a light emitting diode bar system of a xerographic an image forming device according to claim 15, wherein the frequency is modulated up and down at an asynchronous rate.

18. (New) An image forming device including the light emitting diode bar system of claim 8, and further having an electrically chargeable photoreceptor on which a latent image of an original image is formed by the light emitting diode array, which latent image is subsequently developed with toner and then transferred to a transfer surface.

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